

REMARKS

Favorable reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 7-14, 35 and 42 are being examined. Claims 7-14, 35 and 42 has been rejected under 35 U.S.C. § 112 first paragraph. Claims 7-14, 35 and 42 have been rejected under 35 U.S.C. § 103(a). Claims 7, 10, 13 and 14 have now been amended. Claims 35 and 42 have now been cancelled. Withdrawn claims 1-6, 15-34 and 43-57 have now been cancelled.

Objections

Claim 7-14, 35 and 42 have been objected to for comprising non-elected subject matter. Claims 35 and 42 have now been cancelled, rendering moot Examiner's objection. Claims 10, 13 and 14 have been amended such that only elected subject matter is claimed. Applicant maintains that the language of Claim 7 should be examined once Claims 8-14 are found allowable.

35 U.S.C. § 112, First Paragraph Rejection

WRITTEN DESCRIPTION

Claims 7-14, 35 and 42 have been rejected under §112, first paragraph for inadequately describing the claimed invention. The Examiner specifies that the specification does not disclose methods of generating **ANY** inhibitor, rather just antibodies. In addition, the Examiner states that although there is adequate support for antigen compositions comprising zinc and cobalt as metal and porphyrin as chelator, the specification does not disclose antigen compositions comprising **ANY** metal ion bound to **ANY** chelating compound.

Examiner's rejection is respectfully traversed.

However, in order to expedite prosecution of this case, Claim 7 has been amended to limit the inhibitor to an antibody to gelatinase B. The compositions as presently claimed are fully described since they are limited to those having structural and electronic properties similar to a functional domain of gelatinase B. The

specification teaches the structure of gelatinase B in Figures 2A-C. The specification also teaches which compositions have similar structural and electronic properties similar to those of gelatinase B. Specifically, the specification teaches that compositions having Zinc or its analogous ions Cobalt or Cadmium as its metal ion may be used – see page 13, lines 18-20. Further, the specification teaches that porphyrin is the preferable chelator of the metal ion – see page 15, lines 4-6. Methods of generating such compositions are also fully disclosed - see Page 15, line 17 – Page 16, line 28. The specification also teaches from where the compositions are commercially available – see page 16, lines 29-30.

As such, Applicant maintains that compositions for generating antibodies to gelatinase B are fully disclosed.

ENABLEMENT

Claims 7-14, 35 and 42 have been rejected under §112, first paragraph for not being enabled. The Examiner states that while a composition comprising cobalt as metal and porphyrin as chelator (CoTCPP) is enabled as a suitable antigen for generating an antibody to gelatinase B, there is no enablement for other compositions as suitable antigens.

Examiner's rejection is respectfully traversed.

Claim 7 has now been amended such that it is limited to generating an antibody to gelatinase B.

By virtue of this limitation, the compositions are limited to those having structural and electronic properties similar to its functional domain – i.e. those comprising Cobalt or Zinc and porphyrin as chelator.

The Examiner notes that the composition comprising cobalt as metal and porphyrin as chelator (CoTCPP) is enabled.

Applicant wishes to point out that since filing of the instant specification compositions comprising zinc as metal and porphyrin as chelator (ZnTCPP), as disclosed in the original specification, were shown to be excellent antigen candidates for generating antibodies to both gelatinase B and gelatinase A, please see attached declaration by Inventor Dr. Irit Sagi under 37CFR 1.132.

Accordingly, Applicant maintains that the claimed method for generating an antibody to gelatinase B is enabled.

In view of the above limitations, Applicant believes to have overcome 35 U.S.C. § 112, first paragraph, rejections.

35 U.S.C. § 103(a) Rejections

The Examiner has rejected claims 7-14, 35 and 42 under 35 U.S.C. § 103(a) as being made obvious over Harada et al (Photochem. Photobio. 1999, pp298-302) in view of Galvez et al (JBC 2001, 276, p.37491-37500) and Kleifeld et al. (JBC 2001, 276, pp17125-17131).

The Examiner states that Harada et al teach generation of a monoclonal antibody to Zn-TCPP type hapten.

The Examiner further states that Galvez et al teach monoclonal antibody, anti-MTI MMP mAbs.

In addition, the Examiner states that Kleifeld et al teach a method of making metalloprotein inhibitor using the knowledge of structural and electronic properties similar to metalloprotein functional domain of the metalloprotein.

The Examiner then goes on to make the argument that one would be motivated by Kleifeld to combine the teachings of Harada and Galvez to generate an antibody to a metalloprotein by using a Zn-TCPP hapten.

Examiner's rejection is respectfully traversed.

Claim 7 has now been amended to clarify that the antibodies are generated by **using** a composition comprising a metal ion-bound chelator.

In sharp contrast, Harada et al teach generation of antibodies using a TCPP type hapten. In this case, no metal ion is bound to the chelator.

"Antibody 03-1 raised against TCPP binds (meso-tetrakis[4-carboxyphenyl]porphyrinato) zinc (Zn-TCPP)...."Page 298, column 2, lines 1-2, Harada et al.

Applicant contends that the Examiner has not identified all the salient elements of the claims and a *prima facie* case for obviousness has not been properly set forth. As such the primary reference should be removed and cannot be combined with Galvez et al and Kleifeld et al to render the claims obvious.

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Examiner: Mohammad Y. Meah
Group Art Unit: 1652
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In view of the above amendments and remarks it is respectfully submitted that claims 7-14 are now in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,



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Enclosures:

- Petition for Extension (Two Months)
- Appendix with Figures and Legend
- Declaration and CV of Prof. Irit Sagi